

CLAIMS

1. An encapsulated product comprising a plurality of micro-capsules formed from a plurality of micro-organisms and having a lipophilic active encapsulated and passively retained within said micro-capsules, said lipophilic active not being a natural constituent of said micro-organisms, said micro-capsules having:

(a) an at least substantially intact cell wall; and

(b) an intact cell membrane;

wherein said micro-capsules are formulated to target delivery of said micro-capsules and said lipophilic active to a desired at least one mucous membrane.

2. An encapsulated product according to claim 1, wherein said micro-capsules are formulated as one of the group consisting of: syrup, sachet, chewable, chewing gum, orodispersible, dispersible effervescent, dispersible tablet, compressed buccal tablet, compressed sublingual tablet, chewable tablet, melt-in-the-mouth, lozenge, paste, suspension, powder, gel, tablet, compressed sweet, boiled sweet, cream, suppository, snuff, spray, aerosol, pessary, and ointment.

3. An encapsulated product according to claim 1, wherein said micro-capsules are formulated within a one- or two-part gelatin capsule or an enteric coating.

4. A method of manufacture of an encapsulated product, wherein said encapsulated product comprises a plurality of micro-capsules formed from a plurality of micro-organisms, comprising the step of:

(i) contacting said micro-organisms with a lipophilic active to encapsulate said lipophilic active within said micro-organisms;  
said lipophilic active being encapsulated and passively retained within said micro-capsules, said lipophilic active not being a natural constituent of said micro-organism, said micro-capsules having:

- (a) an at least substantially intact cell wall; and
- (b) an intact cell membrane,

further comprising the step of:

- (ii) formulating said micro-capsules to target delivery of said micro-  
5 capsules and said lipophilic active to a desired at least one biological membrane.

5. A method of manufacture of an encapsulated product according to claim 4, additionally comprising prior to said encapsulation step, an at least one treatment step selected from the group consisting of: contacting said micro-organism with an alkaline  
10 bleach solution, incubating said micro-organism between 45-60 degrees C, and contacting said micro-organism with a proteolytic enzyme.

6. A method of manufacture of an encapsulated product according to either one of claims 4 and 5, additionally comprising after said encapsulation step or said additional  
15 treatment step, a conditioning step, wherein said micro-capsules are incubated in a dry environment between 15-50 degrees C.

7. A method of manufacture of an encapsulated product according to any one of claims 4-6, wherein said encapsulation step comprises contacting said micro-organism  
20 with a lipophilic active in liquid form, said lipophilic active being capable of diffusing into said cell wall of said micro-organism without causing total lysis thereof, the treatment being carried out in the absence of a lipid extending substance as a solvent or micro-dispersant for the active and in the absence of a plasmolyser, whereby the active is absorbed by the micro-organism by diffusion across said cell wall and is retained passively  
25 within said micro-organism.

8. An encapsulated product according to any one of claims 1-3 or a method of manufacture of an encapsulated product according to any one of claims 4-7 wherein said

micro-organism is selected from the group consisting of: fungus, bacterium, alga and protozoa.

9. An encapsulated product or a method of manufacture of an encapsulated  
5 product according to claim 8 wherein said micro-organism is a yeast selected from the taxonomic order *Endomycetales*.

10. A method of treatment of a patient comprising administering to said patient a medicament comprising the product of any one of claims 1-3, 8 or 9.